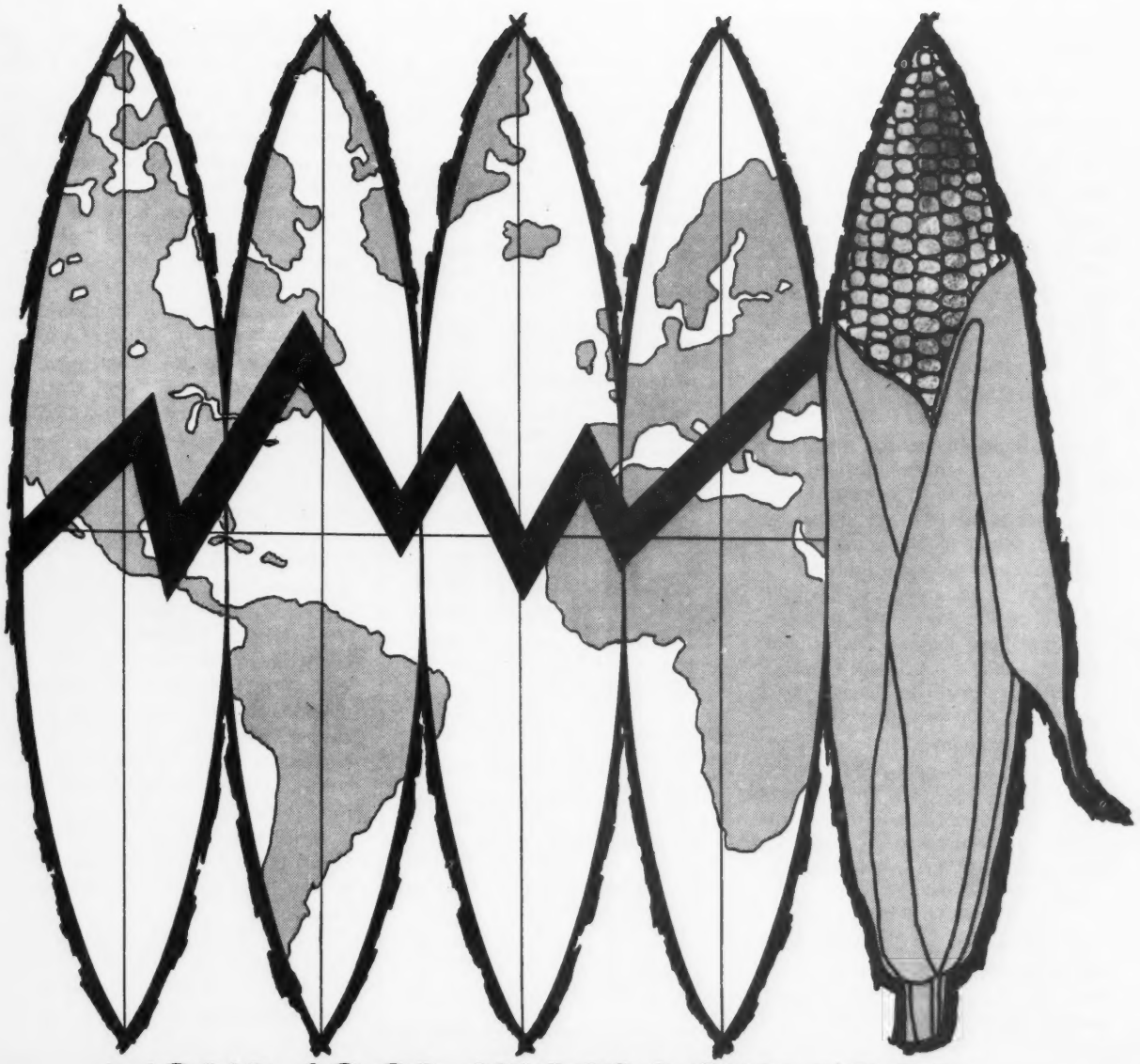
THE FARM INDEX

U.S. Department of Agriculture / August 1974



WORLD FOOD: PRICES & THE POOR

Outlook

Following 18 months of disrupted market conditions, the cattle industry has a new dilemma—drought. As of July 1, U.S. cattle numbers reached a record 138 million head, some 93 percent of which were on the Nation's ranges and grasslands.

If dry conditions continue or worsen, movement of cattle off grassland will probably prove heavier and sooner than the usual fall increase—pushing total slaughter above year-earlier levels.

The influx of range-fed cattle threatens to depress prices for Choice fed steers, despite anticipated tight supplies of fed cattle. Choice steer prices during October-December could then average in the low $40's per hundredweight, with most of the weakness in cow and calf prices.

However, much improved moisture conditions could further delay the gain in cow slaughter and slow the rate of non-fed cattle marketings. This condition would drive Choice steer prices sharply higher later this year and into early 1975, as total beef production becomes more dependent upon marketings from feedlots, which have sharply reduced inventories. On July 1, the 23 major cattle feeding States reported only 10 million cattle on feed—the least since 1968.

Hog slaughter this season is expected to top last summer's unusually low levels by some 10-15 percent. Prices, which peaked near $40 per 100 pounds in July, will probably retreat to the mid-$30 range late this summer.

Seasonally increasing slaughter this fall will drive the market lower again. More pork and increased supplies of lower grade, cheaper beef are forecast to hold hog prices in the low $30's during October-December.

Farrowing intentions for the June-November pig crop pointed to smaller pork supplies into early 1975. Recent sharp spurts in corn prices could trim production even further, so look for less pork and higher trending hog prices next year.

It's still downhill for the U.S. sheep and lamb industry. This year's lamb crop is estimated at 10.6 million head —off 8 percent from last year.

MARKETING • FINANCE OUTLOOK TRANSPORTATION • LIVESTOCK & MEAT • WORLD AGRICULTURE • FARM REAL ESTATE MARKET DEVELOPMENTS • AGRICULTURE • FOOD • FERTILIZER • DAIRY • DEMAND • FRUIT • VEGETABLE • COTTON • WOOL • WHEAT • TOBACCO • POULTRY & EGG • FARM PRICE • INCOME • FEED • FATS & OILS • COST • NATIONAL

Situation Update

Here are the release dates for ERS's outlook and situation reports through the end of the year. Single copies are available on request. Each report also has a mailing list to which your name may be added. Write ERS Publications Unit, Rm. 0054, USDA, Washington, D.C. 20250.

Subject	Summary released to press	Publication available to public
Dairy	Sept. 4	Sept. 12
Agricultural Supply and Demand	Sept. 12	Sept. 12
Tobacco	Sept. 13	Sept. 23
Poultry and Egg	Sept. 20	Sept. 30
Agricultural Outlook Digest	Sept. 25	Oct. 3
Fats and Oils	Sept. 26	Oct. 4
Rice	Sept. 30	Oct. 8
Livestock and Meat	Oct. 9	Oct. 18
Agricultural Supply and Demand	Oct. 11	Oct. 11
Wool	Oct. 17	Oct. 30
Vegetable	Oct. 23	Nov. 1
Agricultural Supply and Demand	Oct. 25	Oct. 25
Agricultural Outlook Digest	Nov. 4	Nov. 6
Cotton	Nov. 1	Nov. 11
Fruit	Nov. 5	Nov. 13
Dairy	Nov. 6	Nov. 14
National Food	Nov. 8	Nov. 18
Demand and Price	Nov. 11	Nov. 19
Agricultural Supply and Demand	Nov. 11	Nov. 11
Wheat	Nov. 12	Nov. 20
Marketing and Transportation	Nov. 13	Nov. 21
Feed	Nov. 14	Nov. 22
Fats and Oils	Nov. 15	Nov. 25
Agricultural Finance Outlook	Nov. 18	Nov. 26
Livestock and Meat	Nov. 20	Nov. 29
Poultry and Egg	Nov. 21	Dec. 2
World Agricultural Situation	Nov. 25	Dec. 4
Agricultural Outlook Digest	Nov. 26	Dec. 5
Agricultural Supply and Demand	Dec. 11	Dec. 11
Tobacco	Dec. 13	Dec. 23
Fertilizer	Dec. 16	Dec. 24
Agricultural Supply and Demand	Dec. 24	Dec. 24

Lamb slaughter may pick up seasonally this fall, but dry pasture conditions have cut into the number of lambs reaching eligible slaughter weights. First half 1974 sheep and lamb slaughter fell 8 percent from last year. Further declines are expected during the second half. Commercial sheep and lamb slaughter for all of 1974 is projected 10 percent below the 9.5 million slaughtered in 1973.

Choice slaughter lamb prices will probably range in the low $40's per hundredweight through summer, but back off to around $38-$40 in late fall under mounting pressure from other meats.

Less sweet corn, celery, carrots, and tomatoes, but more lettuce and cabbage. That's how the vegetable supply lines up for this summer. With acreage down 2 percent from last year—and assuming average yields—overall production of 14 fresh vegetable crops could drop 1 percent from a year ago.

Also, look for fewer melons from much less acreage, but probably more onions.

The watermelon crop is estimated at about 13 million hundredweight—some 16 percent shy of last summer's tally. U.S. acreage is down about 13 percent, with biggest dropoffs in Texas, Arizona, and Alabama.

Cantaloup production may dip 11 percent from a year ago. Acreage reductions are biggest in California, where growers have shifted to more profitable crops.

Acreage planted to onions this summer stands about 7 percent higher than last year, with California, New York, and Colorado the major gainers. The added acreage, however, further clouds the price picture for growers, who have endured depressed prices since Texas harvested a giant crop last spring.

Grower prices for fresh vegetables in general are expected to reverse a 6-month trend and hold near or slightly higher than a year earlier. Only slight to moderate seasonal declines are in prospect.

This fall, fresh vegetable prices could shoot substantially higher than in 1973, when grower prices plunged between the third and fourth quarters.

Processed vegetables opened the 1974/75 marketing year on the thin side. Five percent more processing acreage this year should bring some relief, but retail prices will rise nonetheless.

Prices for canned vegetables will probably advance at a faster clip than for frozen ones. As of July 1, frozen vegetable stocks stood 34 percent larger than a year earlier, when supplies proved abnormally small.

Both canners and freezers face unusual pressure this season. Raw product costs in some instances are nearly double a year ago. Tinplate and other supplies are high-priced, particularly in the California tomato area. Wage rates are edging up too.

Dry weather, excess moisture, and disease damage have all worked against this year's wheat crop. USDA put wheat production as of August 1 at 1,840 million bushels. That's 8 percent more than a year ago and a new record. But it's 4 percent less than what the Department had estimated a month earlier on July 1.

Yields are figured at 29 bushels per harvested acre, lowest in 6 years. Wheat stock, despite expectations of a record harvest, could be the smallest in over 25 years, thus holding total wheat supplies to below last season's level. This means the U.S. is no longer the world's biggest holder of wheat. Ahead of us are the U.S.S.R. and Canada.

Uncertainty continues to cloud the domestic price outlook for wheat, says ERS. Normally, a bountiful crop depresses prices at harvest, but that has not happened so far this season. Farmers have not marketed as much of the early wheat harvest as usual and since market supplies have been tight, early season buying kept harvesttime prices at record highs. In the short run, lingering uncertainty about weather and demand could cause wide price fluctuations. But as the year progresses, and assuming marketings pick up and prospects indicate a record 1975 U.S. crop, supplies could bear down on wheat prices.

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Nationwide, off-farm work provides over half of total income for farm families. This survey from a major farm State focuses on details of such off-farm work.

In recent years, agriculture specialists have become more and more aware of the important role that outside income plays in the farmer's life.

Nationally, around half of the income of the farm family comes from off-the-farm work.

Now, in a survey from Illinois, one of the most important agricultural States, comes further details of not only off-farm income, but of the farm families involved.

As was true nationwide, Illinois farm families receive on the average more than half of their total income from nonfarm sources. For 1971, the survey year, farm family income in Illinois averaged $10,960. Of this, $5,675 was from off-farm work and $5,285 from net farm income.

Wages and salaries comprised the major source of off-farm income and accounted for $2 out of $3 earned off the farm and for better than $1 out of $3 of total farm family income.

Trades are tops. The most often reported off-farm work that the Illinois farmers were engaged in was in the trades—as carpenters, electricians, repairmen. Their wives were most apt to be in office work—as secretaries, clerks, and bookkeepers.

Other major off-farm work for farmers included public service and factory jobs, while for their wives, the main occupations were teaching and in medical positions such as nurses, dental assistants, and laboratory technicians.

The most frequent reason Illinois farmers gave for working off the farm was to earn money to invest in their farming operations or to reduce farm debts.

Urge to stay. "These reasons suggest a desire on the part of these farmers to remain in farming by further expanding their farming operations and improving their equity positions," report the economists who did the survey.

Other reasons farmers cited for working off the farm include earning money for their children's education, for home improvements, family needs, and retirement.

Illinois farmers who did not work off the farm gave as their most frequent reason the fact that their farm required full-time labor. More than 2 out of 5 of the farmers who had held off-farm jobs sometime during the 1960's but not in 1971 said they discontinued it due to farmwork needs. More than 1 in 5 cited age as the reason for not seeking off-farm employment.

Outside income was especially important to those farm families earning less than $5,000 net farm income. Their farms tended to be small in terms of acreage, livestock numbers, and gross sales, and tended not to require all of the farmer's available labor. In fact, about 3 out of 4 of the farm operators with gross sales under $10,000 said they had time available for off-farm work.

In Illinois, the combination of both farm and off-farm work appeared to provide the staying power for many farmers to remain in farming. Most farmers, especially those on small farms, seemed satisfied with their dual employment as a means to earn adequate family income. Only 6 percent of the farmers surveyed expected to leave farming in the next 5 years and shift entirely to off-farm employment.

Determining factors. The study noted that a number of factors appeared to influence the level of off-farm income. Among them—

Farm size. Illinois farmers with large farms—either in terms of planted acreage or more intensive livestock operations—had less time available for off-farm work. Only 30 percent of the farmers who had gross sales over $10,000 were involved in off-farm work. This compares with 66 percent of the farmers with gross sales under $10,000 engaging in off-farm work. Off-farm income for farmers operating 500 acres or more averaged only $1,750, while it averaged $5,700 for farmers operating less han 180 acres.

Education. The more education a farmer had, the more money he earned, both in terms of net farm income and off-farm income. Farmers with vocational training averaged $4,540 from off-farm earnings—nearly $700 more than those without it. Farmers with college degrees averaged more than twice as much off-farm income as those with only a high school diploma.

Health. Farmers reporting good health earned combined off-farm and net farm incomes averaging $12,040. Farmers with poor health—while receiving the highest incomes from pensions and retirement benefits due to older age—earned a total farm family income that averaged only $5,760.

Length of work experience. Higher wage and salary earnings were reported by those who had more work experience. For example, farmers with 2 years or less off-farm work experience averaged wage and salary incomes of $4,990. Wives with that amount of experience earned $2,160. But farmers with 12 years or more experience averaged $8,333, and wives in this category, $5,760.

Traveling distance to work. Off-farm income tended to be highest for those traveling the farthest. Farmers traveling 3 miles or less to their off-farm jobs averaged $5,340; their wives, traveling the same distance, $3,065. But by traveling 25 miles or farther, farmers averaged $8,355; wives, $4,220.

[Based on an article to appear in a forthcoming issue of *Agricultural Finance Review* entitled "Increasing Incomes of Farm Families Through Dual Employment," by R. J. Hanson, University of Nebraska, and R. G. F. Spitze, University of Illinois.]

Farm Debt Towered in the Sixties

Fewer farmers owe money these days but their total debt load has never been greater.

Only about half of the Nation's farmers were in debt in 1970, a decline from 1960. But even though there were fewer operators and a smaller percentage of all operators in debt, total operator debt has more than doubled during the 1960's.

For all farms with debt, the average amount owed per farm jumped from $49,000 to $82,000 on Class I farms with yearly earnings of $40,000 and over) and from $3,000 to $7,000 on the smallest farms.

The proportion of indebted farmers varied according to the economic size of a farm. There were outstanding debts on 4 out of 5 Class I farms but only 2 out of 5 of the smallest farms. Between 1960 and 1970, debt became increasingly concentrated on larger farms.

Similarly, larger farms increased their share of farm income earned and land and buildings owned during this period.

The higher debt level for larger farms doesn't necessarily mean that these farms are in an unfavorable economic position. In fact, the repayment ability on larger farms, as determined by a ratio of farm income to debt, appears more favorable now than 10 years ago. Also, debt appears to be an important factor in explaining farm growth.

Income from off-farm sources also affects a farm's debt-carrying capacity. Off-farm income becomes increasingly important as farm size decreases. In 1970, off-farm income ranged from 15 percent of total income for Class I farms to 96 percent for the smallest units.

When both farm and off-farm income are considered in relation to debt, operators in Classes II and III (with annual incomes of $20,000–$39,999 and $10,000–$19,999, respectively) are often worse off than operators of either larger or smaller farms. These farms are apparently too large to let the operator engage in extensive off-farm work, but not large enough to benefit fully from the greater returns of larger units.

The larger farms which carry most of the farm debt seem to be the most efficient economically. For instance, Class I farms in 1970 produced $1 of net income for each $17 of assets utilized. In contrast, Class II farms had $20 and Class III and smaller units, over $30 of assets for each dollar of income. Thus, there is incentive for increasing farm size, and, consequently, the size of debts.

[Based on manuscript by J. Bruce Hottel, Robert D. Reinsel, and William D. Crowley, National Economic Analysis Division, entitled Debt Status of U.S. Farm Operators and Landlords by Economic Class, 1960, 1966, 1970.]

Public Corporations: Even Traders in Farmland

Public corporations are active in the farmland market but they appear to be selling land as fast as they're buying it.

ERS's latest report on farmland transfers shows the value of real estate bought by publicly held corporations rose from 1 percent of total farmland value in 1973 to 3 percent in the survey year ended March 1, 1974. This gain, however, was cancelled out by corporation sales, which climbed by a like amount.

Taking all farmland transfers in the 1973–74 reporting period, the public corporations accounted for 1 percent of the total number—unchanged from the previous two surveys. In terms of acres bought and sold, these corporations upped their share—by 1 percent—but they still represented only 2 percent of all land changing hands in 1974.

Individuals continue to dominate the farm real estate market, the ERS report says. However, their share of total transfer activity trended down in the 1972–74 period. Purchases by individuals accounted for 64 percent of all acreage bought in 1974 versus 72 percent in 1972. Sales in the same period dipped from 75 percent to 69 percent.

The second most active group in the real estate market are privately held corporations, mainly incorporated family farms. These corporations bought 18 percent of all farmland acreage transferred in late 1973 and early 1974—up one-half from the previous year. Their real estate sales rose only 13 percent, so on balance the private corporations showed a net increase in acreage held.

The percentage of parcels bought by private or closely held corporations has remained at 4 percent since 1972. But their share of the total value of farmland purchased went from 9 percent in 1972 to 13 percent for the period ended March 1, 1974.

Transfer activity of partnerships was mixed. They came in for a slightly higher proportion of all farmland purchases—10 percent in 1974 against 8 percent a year earlier—and accounted for a slightly lower percentage of all sales—5 compared with 7. Acreage purchased, by contrast, declined from 16 to 15 percent, whereas the percentage of acres sold climbed from 8 to 12.

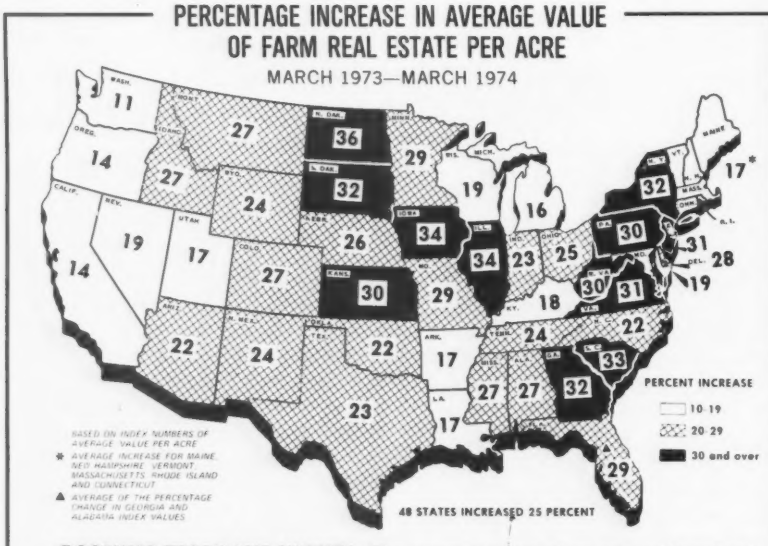
Partnerships' share of the total value of farmland transfers went from 15 to 17 percent in 1974, and their share of sales remained at 10 percent.

Combined transfers of all business organizations inched up in 1974, reaching a rate of 58.3 parcels for every 1,000 farms or ranches in existence. This marked the most rapid rate of transfer since 1948, the ERS report notes. Voluntary transfers averaged 41.2 per 1,000 farms, also the highest ratio since 1948. Total transfers for all reasons were estimated at 151,200—the largest number since 1962 and about 5,500 more than in the previous year.

As in the past, most tracts were bought to enlarge existing operations. However, the percentage to be used as complete farms rose somewhat, and the proportion of add-on and part-time farms dropped slightly.

Survey results indicating the probable use of farm real estate transfers were much the same as a year earlier.

Five out of 6 purchases were expected to remain in agricultural pro-


PERCENTAGE INCREASE IN AVERAGE VALUE OF FARM REAL ESTATE PER ACRE
MARCH 1973—MARCH 1974
PERCENT INCREASE
10-19
20-29
30 and over
48 STATES INCREASED 25 PERCENT
BASED ON INDEX NUMBERS OF AVERAGE VALUE PER ACRE
* AVERAGE INCREASE FOR MAINE, NEW HAMPSHIRE, VERMONT, MASSACHUSETTS, RHODE ISLAND AND CONNECTICUT
▲ AVERAGE OF THE PERCENTAGE CHANGE IN GEORGIA AND ALABAMA INDEX VALUES

BOOMING FARMLAND VALUES. The average value of an acre of farmland soared $63 in the survey year ended March 1, 1974, pushing the national figure to $310 an acre. The increase of 25 percent splintered all records. North Dakota led the pack with a 36-percent advance. Washington's gain was the smallest, 11 percent. Per acre values were lowest in New Mexico ($65)—due to the fact that grazing land with sparse vegetation represents the bulk of the land in farms and ranches—and highest in New Jersey ($2,100) where demand for farmland is strong for nonfarm uses. Nationwide, the average farm operating unit was valued at $125,500 on March 1, 1974. Arizona's units, thanks to irrigated farms and ranches, topped the list at $756,000. On the other end of the scale were Kentucky, Tennessee, and West Virginia (under $60,000) where values mirror the large number of part-time and retirement farms.

Fats for Feeds

They may not be the hottest item on Wall Street, but animal feeds are proving a major growth market for industrial fats and oils.

Over the past two decades, the amount of fats added to feeds swelled from 0.1 billion to 1.0 billion pounds. The gain reflects increased production of commercial feeds as well as greater use of fats in animal rations. However, the growth rate has slowed in recent years and was actually down slightly in 1973.

Tallow and greases are the major fats used by commercial feed producers. As much as 10 percent fat may be added to feeds, depending on type. Poultry rations generally take the highest rate, with 4 percent common in broiler feeds.

Why add fats? They provide energy, aid in growth, boost feeding efficiency, increase palatability, and decrease dustiness. Fats also make feeds easier to handle and act as a lubricant, thus reducing wear on handling, mixing, pelleting, and other machinery.

Mixtures of fine particled feed additives become more homogenized and stable with the addition of fats. And for the fussy eater, fats give rations a better appearance.

[Taken from "Economic Aspects of the Vegetable Oils and Fats Industry in the United States," paper presented by George W. Kromer, Commodity Economics Division, at the International Trade and Development Conference, United Nations Economic Commission for Asia and the Far East (ECAFE), Seattle, Wash., June 10, 1974.]

duction for at least 5 years. These tracts accounted for 91 percent of the acres transferred and 87 percent of farm real estate value.

Conversion to rural residence use was expected to make up over half the remaining tracts (9 of 17 percent) but only 2 percent of the acreage and 4 percent of the value.

Subdivision use was slated for 3 percent of the tracts, followed by forest, mineral, recreation, commercial or industrial, and other uses—each with 1 percent or less.

Tracts to be converted to nonfarm uses within 5 years were generally smaller than those to remain in farms, which averaged 361 acres.

The average price of land for 5 of the 7 nonfarm uses exceeded the average of the tracts for agricultural use. Land to remain in farms averaged $331 an acre. The price for other uses ranged from $263 in forestry to $1,173 in commercial or industrial use.

[Based on *Farm Real Estate Market Developments*, CD–79, July 1974, by William D. Crowley, Jr., Robert D. Reinsel, and John F. Jones, National Economic Analysis Division.]

Economists Re-examine Impact of Ban On Feed Additives

What would it cost livestockmen and consumers if we had to slap a ban on antibiotic feed additives—ingredients used to promote faster, more uniform growth in animals.

Around this time a year ago a team of ERS researchers took that question to task. They based their analysis on conditions prevailing in 1970. But as most people know, there's been quite a jump since 1970 in the costs of raising livestock and in the price of red meat at the retail counter. Put another way, prohibiting the use of antibiotic feed additives would have greater economic consequences today than a couple of years back.

Now, ERS researchers have brought their estimates up to date, as discussion continues over whether these feed additives pose a hazard to human health and might have to be taken off the market. Here are some of the conclusions based on 1973 conditions:

Under the first of two assumptions used in this study—that producers feed more animals to keep output at pre-ban levels—total production costs would shoot up nearly $802 million. That's $325 million more, or 68 percent, than the economists' previous estimate. Translated to the animal on-the-roof, this would mean an average cost increase of 75 cents per 100 pounds for cattle and calves and $2.88 per 100 pounds for hogs.

If the entire cost hike were to be borne by consumers, they would have to up meat spending by $3.85 per person in order to maintain red meat use at pre-ban levels.

This assumes, however, that livestock mortality rates would not change as a direct result of the ban. In the event death rates did climb, each 1-percent advance would raise liveweight production costs by an additional 16 cents per 100 pounds for cattle and calves and 20 cents for hogs to keep output at pre-ban levels. Total production costs would soar an additional $96 million.

The second possibility assumed in this study is that producers would make no changes in their operations—i.e., they'd feed the same number of animals and for the same feeding periods. If that happened, livestock output and meat consumption would sink, with a subsequent rise in meat prices.

The economists figure total annual spending for beef, veal, and pork would increase by $2.1 billion, or $10.26 per person. Their previous estimate under this assumption was $1.6 billion, or 24 percent less than the latest one.

With no change in demand relationships, livestock producers would have bigger net returns during the adjustment period. The combined net revenue of beef cattle, veal calf, and hog growers could swell by as much as $2.5 billion.

Each 1-percent gain in mortality associated with the ban would lift meat expenditures by an additional $261 million, or about $1.26 per capita. The added increase in producer net revenues would amount to some $324 million.

[Based on "Economic Importance of Antibiotics in Feeds to Producers and Consumers of Pork, Beef, and Veal," paper by Henry C. Gilliam, Jr., Commodity Economics Division, and J. Rod Martin, National Economic Analysis Division; presented to a symposium on the Use of Antimicrobials and Hormones for Livestock Production, University of Maryland, July 30, 1974.]

Nearly 3 in 4 Farmland Owners Are "Active Farmers"

Q: How many farmland owners do we have?

A: Around 3.3 million, according to the latest figures.

Q: How many owners are "active" farmers?

A: Not quite 3 out of 4. The others are nonfarm landlords—they lease their holdings to other parties.

These findings are contained in a new ERS report entitled "Farm Landlords in the United States," which analyzes data drawn from the 1969 Census of Agriculture and the 1970 Survey of Agricultural Finance.

The report says there were 927,400 nonfarm landlords in 1970, and they represented 28 percent of the 3,315,000 farmland owners in the 48 contiguous States.

Of the 3.3 million, Texas led in the State breakdown (267,600), followed by Iowa (170,700), and Illinois (164,700). These States also made the top three in the nonfarm landlord class: Texas with 87,500 nonfarm landlord owners, Illinois with 70,900, and Iowa with 63,100.

The average amount of land owned by all title holders—operators and nonoperators—was 320 acres. The nonfarm landlords had larger holdings on the average than the owner-operators—380 acres versus 296.

In the Eastern States, most landlords owned less than 180 acres. Their holdings were generally valued at less than $40,000. Landlords in the West, in contrast, had larger holdings in terms of acreage and in value. Over half the dollar value of rented land was rented from landlords whose holdings were worth $100,000 and up.

On the whole, the report says, it appears that no one landlord or group of landlords controlled the land resource in a given area. The distribution of ownership among landlords was quite uneven. Concentration of landlord holdings varied widely among States and regions, depending on the prevailing types of farming enterprises and on land tenure patterns.

Total farmland being rented in 1969 came to 398 million acres, divided up among an estimated 1.7 million leaseholds or rental arrangements. About 59 percent of all rented acreage was cash rented, much of which was pasture and grazing land in the West. Another 30 percent was rented under share arrangements, and the remainder under various cash and share combinations.

[Based on the manuscript Farm Landlords in the United States, by Bruce Johnson, National Economic Analysis Division.]

Vegetables: The Side Dish Becomes an Entrèe

Roast beets with gravy? Brussels sprouts with spaghetti? Even if these dishes aren't appearing on your dinner table, other vegetable main dishes probably are.

Americans have been eating more vegetables during the past 5 years. ERS reports that our consumption of fresh and processed vegetables swelled from 209 pounds in 1967 to 223 pounds in 1973.

Part of the rising popularity of vegetables has to do with prices—price hikes for processed vegetables in particular have been slower than for most other foods. This encourages the use of vegetables as entrees or to extend more expensive meat dishes.

Tomatoes led the increase in canned vegetable consumption. Use of tomatoes and tomato products—which account for half of all canned vegetables—gained 5 pounds per person between 1967 and 1973. Much of the increase came in the last 2 years. Also, canned peas enjoyed bigger demand in 1973 after lagging some in recent years.

Frozen vegetable use (excluding potatoes) perked up in 1973 after holding steady since 1970. Most of the growth was due to the success of frozen corn-on-the-cob. In contrast, lima bean use drooped, and a small 1972 crop of peas led to smaller consumption in both 1972 and 1973.

There was little change in fresh vegetable use between 1967 and 1973. Most salad items, including lettuce, tomatoes, cucumbers, and peppers, posted advances.

[Based on *Vegetable Situation*, TVS-193, July 1974.]

Yen Buys More, But Impact on U.S. Grain Sales Proves Minimal

Increased buying power doesn't always translate into increased spending.

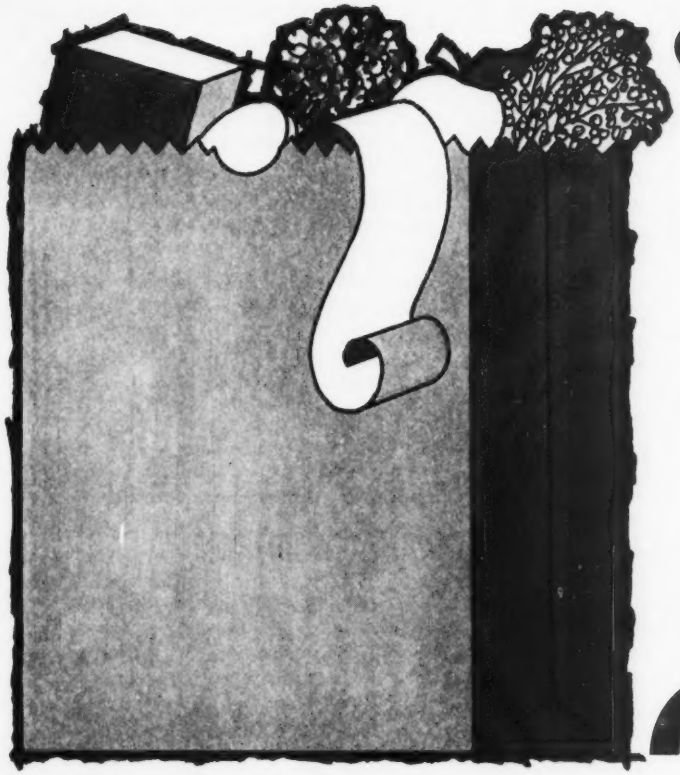
In Japan, for example, the purchasing power of the yen in the U.S. export market surged nearly a third from 1970 to 1973. Yet the only significant impacts were added wheat sales of $5 million in 1972 and $15 million in 1973 . . . as well as an additional $74 million in soybean sales for the 2 years combined.

The sales gains sound substantial, but they made up only 3 and 4 percent of total U.S. wheat sales to Japan in 1972 and 1973, and 7 percent of total soybean sales each year. Japan is the world's No. 1 national market for grains and soybeans.

To weigh the effects of exchange rate shifts on U.S. grain and soybean exports to Japan, researchers estimated the "normal" trade flow in the absence of currency realignments.

Wheat exports, they figured, would have run about 5.2 million metric tons last year—some 200,000 metric tons below what the Japanese actually bought. And soybean exports, which hit an estimated 3.9 million metric tons in 1973, would probably have been about 250,000 metric tons smaller if the old exchange rate of 360 yen to the dollar had been in effect.

[Based on manuscript entitled Impact of Exchange Rate Changes on U.S. Grain and Soybean Exports to Japan, by Bruce L. Greenshields, Foreign Demand and Competition Division.]



supermarkets can cut costs

By adopting some cost-cutting retailing methods, supermarkets might be able to reduce their operating expenses and hold the line on escalating food prices.

The long-range forecast of retail food prices reads one way—higher. But up and down the marketing chain, there's much that can be done to check the rate of increase.

Supermarkets are a case in point. If they found the means to shave their operating expenses, some of the savings could be passed on to the consumer.

Where it goes. Of each dollar consumers spent in a typical supermarket for food in 1973, about 17 cents went to the operator to cover costs and profits for retailing. The costs—amounting to 16 cents of this—were divided about equally between fixed overhead, such as buildings and equipment, and variable expenses to handle the products, such as labor, packaging, and advertising and promotion. The remaining cent of the retail margin was profit.

According to ERS economists, there are ways for stores to cut both their fixed and variable unit costs.

Fixed costs per unit of product can be lowered by increasing the sales volume. Total rent is the same for a store no matter how many items are sold—but as sales increase, the rent cost per item drops.

Overhead costs per unit of product can also be scaled down through better use of space. For example, we're used to seeing meat and frozen food in open or well-type cases, which display few products in relation to the size of the case. But fixed costs per unit of product displayed are lower for multideck refrigeration—freezer cases which extend vertically up to 6 feet high and provide more display area.

How well a store is using its available space can be measured by looking at store sales per square foot of selling area. If stores with 12,000 square feet of selling area selling $4.50 worth of products per square foot were able to up their sales to $5.75, they could reduce store costs by nearly 2 percent of sales, which could then mean lower prices for shoppers.

Some disadvantages. But, the ERS economists caution, there are drawbacks to larger volumes. If consumer demand remains the same, some supermarkets and small stores would have to call it quits for lack of business. Then shoppers would have to pay the additional cost of traveling to stores farther away.

Of the variable store costs, the big three are "receiving" goods at the store, "shelving" (including price marking), and "checkout." These areas for cutting store costs have received less attention than increasing sales volume, although they all offer potential for cost reduction.

"Palletization" is a labor-saving way of unloading goods from the delivery truck at the retail store.

Boxes arrive from the manufacturer or wholesaler already loaded on wooded pallets or platforms. The entire pallet can be moved by forklift from the truck directly to the store's loading dock.

In the short run, this method may raise investment costs, since older stores may not have docking facilities. Also, items ordered in small quantities from wholesalers are often not palletized and must be unloaded by hand. But in the long run, handling can be speeded up and labor costs trimmed.

Shelving the pallet. Pallets also offer pluses when it comes to shelving. For fast-selling items such as mayonnaise, mass merchandising techniques may be the best alternative. Instead of unpacking a pallet and placing the items on store shelves, the whole pallet is moved onto the floor and used as a large display. This practice reduces labor that would have been used in shelving. However, it pays off only in stores that handle large volumes, and for products that sell quickly.

Supermarkets may be using electronic checkout counters in the near future. Instead of ringing up the price of an item on the cash register, the checker simply moves the product—which has been specially coded by the manufacturer—across a scanner that automatically records the price. Prices don't actually appear on each item, only on the grocery shelf. Labor is saved at the price-marking and checkout stages.

Electronics cost. A major drawback to the use of electronic checkout equipment is its high initial cost. Also, if consumer complaints about the lack of prices on each item force stores to mark items individually, the cost savings would be much less.

The meat department also offers opportunities for labor cost reduction. Presently, a number of meat processing chores, such as cutting larger pieces of meat into retail cuts, are done at the retail store. But the job could probably be done more efficiently at the slaughterhouse or wholesale level. The meat could then be delivered to the store in fresh or frozen form.

These changes might create problems for consumers and store employees, however. There has been some initial resistance to frozen meat by consumers, who are accustomed to buying fresh meat and may not know how to judge the quality of frozen meat. And if meat processing is moved from the retailer to other levels, some of the store's meat cutters may face job relocation or even job loss.

Pare promotions. Another cost that stores may be able to economize on is advertising and promotion. A little less than half of such store expense is for trading stamps. By reducing stamps and other promotions, some stores may be able to lower costs and thus food prices.

Store size is important in deciding whether a retailer should change his mode of operation. Most of the techniques described here would be practical only for a larger-than-average-size supermarket. But since surveys of new store openings show that the trend is toward larger stores, we'll probably be seeing more cost-saving techniques in the future.
[Based on special material by Terry L. Crawford and J. Gerald Feaster, National Economic Analysis Division.]

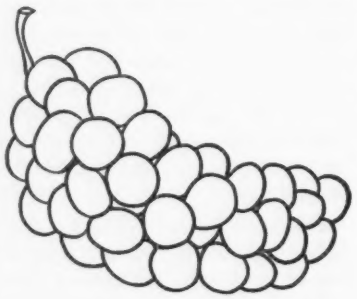
HARVEST BY MOONLIGHT

In a moonlit vineyard, a harvester pulls up to a row and begins beating the vines, shaking loose the grapes. As they fall, they're conveyed and blown into a gondola that's being pulled alongside by a tractor.

This is one of the latest scenes in California, where more than 100 machines now havest grapes sold to wineries.

Machine harvesting of grapes in California started 5 years ago, and an ERS preliminary report indicates that machine owners—at least in the Fresno-Madera area—are satisfied with them.

Growers in the ERS survey indicated they felt they should receive a premium price for mechanically harvested grapes. The grapes had fewer stems and leaves in them than hand-harvested grapes, they said, and thus, more grapes per ton were delivered to the winery.



Thompson Seedless grapes were the main variety the machines harvested, for they tended to shake more easily from the vine than many other varieties.

Much of the machine harvesting was done at night when cooler temperatures aided both the crew and the grapes, which shake from the vine more easily when the thermometer reads below 90 degrees.

The 37 machine owners in the survey operated 54 machines in 1972, and averaged about 238 acres harvested per machine. The short crop that year put tonnage below normal for many of the growers.

Capital investment for the operation ran around $40,000. The harvester cost about $33,000 to $35,000, and the gondolas ran around $3,000 each. Two gondolas were usually used—while one was being unloaded, the other would be in operation in the vineyard.

About a fourth of the owners did extensive contract work. Another fourth did some contracting, usually for neighbors or relatives.
[Based on manuscript entitled Mechanization of Wine Grapes: A Progress Report by Stanley S. Johnson, Commodity Economics Division, and Richard T. Rogers, USDA at Davis, California.]

Limited Tillage Reduces Cotton Costs, Study Shows

Project: to reduce the cost of producing cotton.

With this assignment, an ERS economist is among those in a Mississippi research group exploring the cost savings from limited tillage.

From work at the Delta Branch of the Mississippi Agricultural and Forestry Experiment Station, he's found limited tillage using the herbicide paraquat to kill winter vegetation can save $2.29 an acre over conventional seedbed preparation. Trips over the field were reduced to five.

The cost analysis showed conventional tillage required nine trips over the field with operating costs of $22.42 per acre. Limited tillage costs were $20.13 an acre. Both estimates include costs of fertilizer, equipment, and labor.

With limited tillage, the processes were cutting stalks and subsoiling at an angle to the row in the fall, applying a pint of paraquat broadcast in the spring to kill winter vegetation, fertilizing, and using a seedbed conditioner immediately prior to planting to smooth the bed.

Two trips to chisel and two to disk were thus eliminated.

The study noted several problems with paraquat: (1) it is expensive, and if a second trip is needed this method becomes more expensive than conventional methods, and (2) vegetation killed by paraquat does not seem to rot very rapidly and leaves a large amount of debris that slows down the first cultivation. Hoe labor must also be stepped up when paraquat is used.

However, an encouraging aspect of paraquat was the higher yields attained. While no yield differences were noted in the first year of tests at Mississippi, the minimum tillage plots in subsequent years yielded from 5 to 8 percent more cotton than those under conventional tillage.

The cotton cost researchers at the Mississippi station tried yet another approach to minimum tillage that resulted in a cost per acre of $16.40—$6.02 per acre less than conventional seedbed preparation and $3.73 cheaper than minimum tillage using paraquat.

Under this program, stalks are cut in the fall and cotton fields subsoiled in the fall or spring depending on the weather. In the spring a hipping ridge is used to hip over the old beds while winter vegetation is small. Beds are rehipped and fertilizer applied at the same time about 2 weeks prior to planting. A row conditioner is used to knock beds down to proper height ahead of the planter.

This system had an average yield increase of 5 percent. With average yield on light textured soils in the Mississippi Delta at 700 pounds of lint per acre, this would add 35 pounds of lint, and at 38 cents a pound—the 1974 target price—this would add $13.30 to income. With the cost reduction associated with this program, it would be $19.32 an acre more profitable to use this method than conventional seedbed preparation.

Advantages of this method of minimum tillage indicated from the research include reduced cost of labor, equipment, and fuel; simpler, faster seedbed preparation; increased yields; less soil erosion during winter and early spring rains; and more early cotton which usually brings a better price.

Disadvantages include the fact that the beds are not as pleasing to the eye, that it is difficult to incorporate preplant herbicides effectively with this system, and that it should not be used on fields that are moderately to heavily infested with perennial weeds.

[Based on "The Economics of Limited Tillage," a paper presented by Fred T. Cooke, Jr., Commodity Economics Division, and W. I. Spurgeon, Mississippi Agricultural and Forestry Experiment Station, Stoneville, Miss., at the annual meeting of the Georgia Chapter of the Soil Conservation Society of America, Rome, Ga., June 21, 1974.]

Price Hikes Mixed For U.S. Farm Exports

Last year, U.S. farm goods on the world market cost about 58 percent more than in 1972. But for individual countries it was a different story.

In Guatemala, for example, prices of U.S. exports fell 11 percent from a year earlier, while in Chile, prices vaulted 631 percent.

Calculations are based on a market basket of farm commodities imported from the U.S. in 1973. In Japan—our biggest market—prices rose 52 percent. The average increase proved largest in the lower income countries—63 percent—and smallest in the Communist nations, 47 percent.

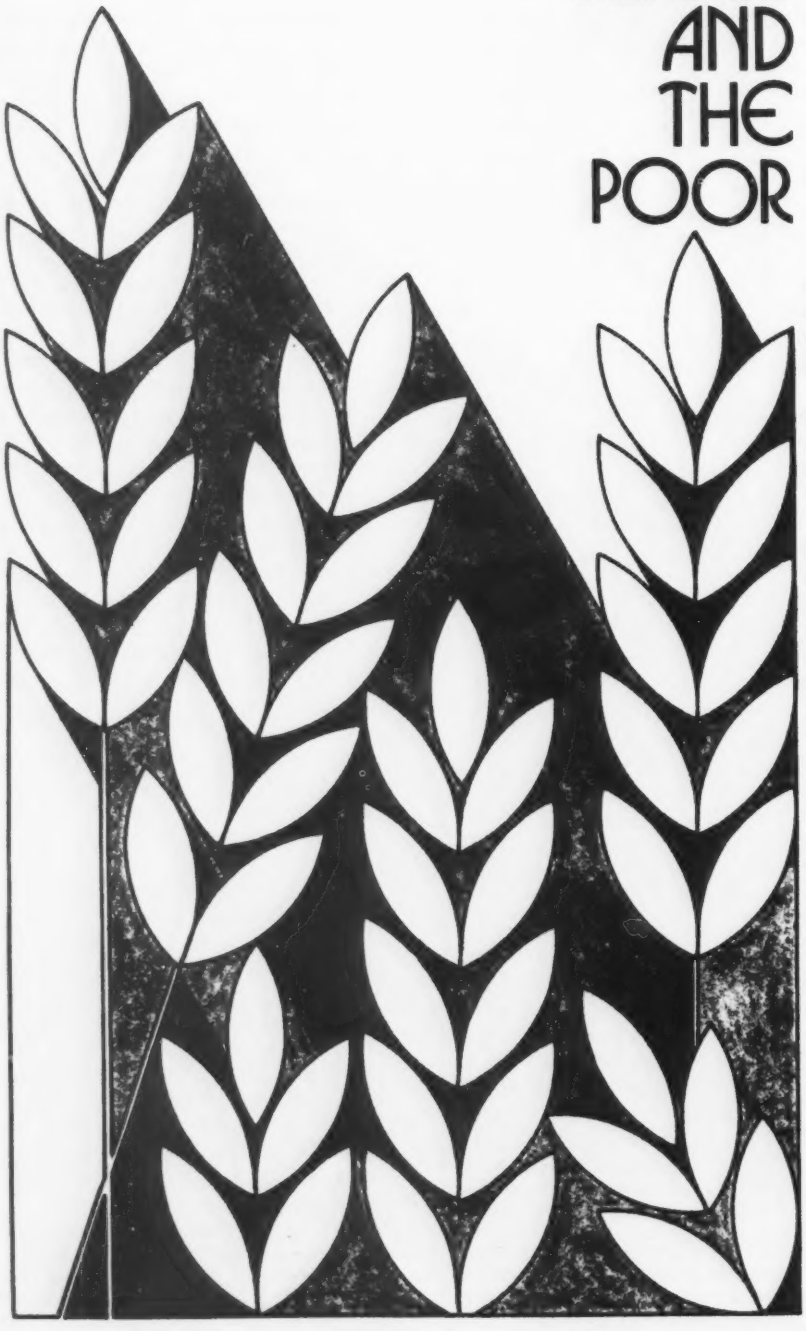
In our major markets, about two-thirds of the overall increase was offset by currency realignments and increases in wages. In real terms (the nominal increase adjusted for the effects of currency realignments and rising wages) prices of U.S. farm exports increased the least in France. But in nominal terms, Canada had the smallest gain. The biggest price hike in real terms was for Germany, and in nominal terms, Spain. Nominal price changes are obviously not very indicative of changes in foreign demand.

The value of the dollar traveled a rocky road last year. It proved particularly unstable relative to the German mark and the British pound.

Moreover, the dollar reacted in a totally different manner from one currency to another. In mid-1973, for instance, the dollar swung back and forth against the mark, held steady against the yen, and appreciated against the pound. Even if dollar prices of our farm exports had been constant during this period, prices of these commodities, in terms of local currencies, would have changed as the value of the dollar changed.

[From *World Monetary Conditions in Relation to Agricultural Trade*, WMC–6, May 1974, by O. Halbert Goolsby and Spencer F. England, Foreign Demand and Competition Division.]

WORLD FOOD: PRICES AND THE POOR



About 2,300 years ago, when asked for the proper time to eat, the Greek cynic Diogenes replied, "If a rich man, when you will; if a poor man, when you can."

These words are just as applicable now in describing the harsh realities of the world food market, where the poor are first to suffer in times of tight supplies.

In the view of one ERS official, the tumultuous events of the past couple of years drive home an important point: world food demand hinges not only on population growth, but also to a large extent on the desire of the developed countries to upgrade and protect their diets.

Their diets rely heavily on protein, particularly protein from livestock products. Since the billion people in the developed nations use practically as much cereal grain as feed for livestock as the 2 billion people in less developed countries use directly as food, such priorities obviously have worldwide implications.

Soviet grain purchases. The Soviet Union's decision to maintain the pace of its livestock production efforts in the face of a poor grain harvest in 1972 provides a striking example of how a major country's actions can affect everyone's food supply and prices.

Instead of waiting out the shortage, as they have done during previous poor harvests, the Soviets made huge grain purchases on the world market. They imported nearly

one-fifth of the total U.S. wheat supply in the 1972–73 crop year, including production and beginning-of-the-year stocks.

U.S. supplies normally available to other countries dropped sharply, and the price of the remaining wheat was bid up to record levels.

Purchasing power game. At this point, the low purchasing power of the poor countries severely restricted their ability to compete for needed food imports. So long as overall cereal production is relatively responsive to needs, effects on the poor are minimal, especially over time. But when demand greatly exceeds supply, market impacts can be harsh—especially in those countries unable to insulate their poor from the market through aid programs such as food stamps.

For example, India's food grain harvest also slumped in 1972–73. In the tug-of-war between closing the gap with imports and saving foreign exchange, diets lost out and food prices were allowed to increase. In some areas food grain rations were cut in half in shops serving the lowest income Indians. Per capita consumption dropped to critical levels.

The widespread suffering in the drought-stricken African Sahel provide an even more tragic example of how low levels of wealth have not been able to command even a minimum diet, much less one similar to those here and in other developed nations.

Food gap continues. Consequently, while an optimistic outlook for the next several years calls for an upward trend in worldwide per capita food production, only modest nutritional improvements are forecast for the masses of people in the developing world.

Even if food production keeps pace with population growth, or gains on it, as projected, an overwhelming number of poor people in these countries will be inadequately fed for decades to come.

Looking to 1985, economists expect that income growth and national efforts to upgrade diets in lower income countries—particularly by using cereals in livestock production—will push demand beyond local crop increases.

By 1985, these countries' dependence on food imports is estimated to be about double the 1970 level.

During the same period, the U.S.'s role as the major food supplier in world markets is expected to expand substantially. The projections, then, add up to a heavy reliance on the U.S. as a source of food for the developing nations.

Unpredictable food markets. Just how the U.S. will approach this situation in coming years is still open to question. Not the least of the uncertainties overhanging future world food balances is the effect of weather variations and energy shortages and costs on food production and prices both here and elsewhere in the world.

Prospective import levels of the Soviet Union, China, Japan, and other major traders are unpredictable, yet their decisions will have a profound impact on the price and availability of food to the less developed countries.

And finally, changes which have recently occurred in the relationship between our domestic food markets and international markets add a new level of instability to the outlook for prices and the poor.

Grain price stabilizers. In the past years, the U.S. has generally been able to moderate price swings both at home and abroad by maintaining large stockpiles of grain.

When international shortages developed—through increased demand, reduced supplies, or both—the availability of U.S. stocks has dampened price fluctuations in the international market while at the same time discouraging domestic price increases.

When grain harvests were plentiful, the accumulation of stocks, along with export subsidies and withholding land from production, has prevented domestic prices from slumping sharply.

However, the past couple of years have seen this situation change completely. Bad weather cut world crop production in 1972, and coupled with successive devaluations of the dollar and continued expansion of demand for livestock products in Europe, Japan, and the Soviet Union, the shortfalls produced a demand for U.S. agricultural exports that virtually wiped out the government-held grain stocks.

Stock estimates for the end of this crop year reflect a sharp downturn from the peak year of 1961 when 38 million tons of wheat and 80 tons of feed grains were in storage.

Depleted government stocks. The 1974 outlook calls for 7 million tons of wheat and 19 million tons of feed grains. Very little will be owned by the government, in contrast to earlier periods when practically all stocks were government-owned.

Since the export surge of 1972–73, importers have generally continued to be free to buy any quantity of food from U.S. traders, and the usual shock absorbers of government stocks and export subsidies have not been around to hedge the impact on domestic and international prices.

Nor are they likely to be on the scene in the near future. Last year's farm legislation deliberately set price support loan rates much lower than prevailing market prices for key commodities—providing an incentive for farmers to market their goods.

The aim of the new law was to avoid the buildup of large government stocks and their high budgetary costs. Agricultural exports also

remain a critical element in reversing the balance of payments deficits which plagued this country in the last decade.

In addition, expanding foreign demand has prompted policymakers to bring once withheld land back into production, thereby depleting another major U.S. food reserve—and price cushion.

Interfacing markets. In effect, then, the law allows U.S. farm prices to reflect international and domestic market forces. And the result of this direct link between U.S. and world markets will be unstable food prices in the foreseeable future.

As local weather conditions and energy resources change from year to year around the world, import needs and export supplies will also vary, and prices will act as the economic barometer of fluctuating supply and demand.

All nations face the problem of adapting to unstable food market prices, but here again, the developed countries have the edge over their less developed neighbors in insulating themselves from the adverse effects of sharp changes.

Market shock absorbers. Adjustment mechanisms such as variable import levies, export controls in the form of licensing, taxes, and subsidies, and the ability to expand agricultural production and carry larger food reserve stocks help to make internal prices less vulnerable to wide variations in international supplies and prices.

Some of these measures, such as reserve stocks, could benefit the world market as well, particularly if they were set up on an international basis.

Lower income countries, of course, would be greatly aided by measures that limited the fluctuation in food prices. But an active search for effective price stabilization techniques that coincide with national interests, especially in the U.S., may have to wait until the degree of instability is known and its effects are fully felt in home markets.

Economic trade-offs. For the U.S., undertaking a program such as renewed accumulation of grain stocks involves trade-offs among various factors.

So long as the balance of payments is of critical importance, the benefit from high export sales of agricultural products on the open market is bound to weigh heavily. On the other hand, farmers and traders may find that export averages would rise if supplies to foreign customers could be assured at reasonably stable prices from year to year.

Food price swings are already a major concern of consumers and labor organizations; farm interests, too, could opt for a dependable medium in lieu of yearly peaks and troughs.

But until the issue is resolved, there's still the question of whether the U.S. and other developed countries should take some other action to help poor nations obtain at least minimum diets.

U.S. food sharing programs. In the past, the U.S. has provided more than $22 billion in farm commodities to less developed countries through its P.L. 480 food aid programs The bulk of the commodities moved under long-term dollar credit programs at an average annual cost of about $1 billion.

This system enabled recipient countries to sell the goods in their domestic markets, invest much of the revenue in economic development projects, and repay the U.S. for the products over time.

In addition, about one-fourth to one-third of the commodities were donated under emergency relief programs.

However, the quantities of cereals allocated to P.L. 480 in fiscal 1974 dipped to the lowest levels since the program started in 1954, even though the dollar cost was still about $1 billion.

The largest cutbacks came in the long-term dollar credit programs, and the current outlook for this type of aid indicates continued decreases. Reduced but significant amounts of food are still likely to be donated.

Commercial exports up. The major reason for the winding down of P.L. 480 is that strong demand, high prices, and negligible stocks make food sharing programs economically unattractive compared to commercial exports.

When the program was initiated several commodities were in chronic oversupply and large stocks were already being maintained. Shipping the excess to poor nations on concessional terms was consistent with farm interests at that time. Now it is not.

However, there are other ways in which rich nations can give a helping hand to the poor. A major thrust could be to provide technical expertise and training in agricultural research and development programs in the developing countries.

Food aid and economic assistance. Another possibility is to combine food aid with other economic assistance programs offered by international agencies such as the World Bank, the International Bank for Reconstruction and Development, and the Agency for International Development.

Food needs could then be considered in the context of other economic needs, and food aid could become a form of investment. As with P.L. 480, revenues from food sales could provide capital for a fertilizer plant, new irrigation facilities, or locally made machinery.

Better solutions to the food problem call for concerted action by many countries and international organizations, and certainly the U.S. can and should play a part.

But it is important that the inputs of the developed nations not be substitutes for the developing countries' own efforts. In the final analysis, improvement in the nutritional well-being of their people depends primarily on how they organize and use their resources.

[Based on "World Food: Prices and the Poor," by Lyle P. Schertz, Deputy Administrator, Economic Research Service, published in *Foreign Affairs*, April 1974.]

Dairy Plants Swap Numbers for Volume

In the past 25 years, the number of plants manufacturing dairy products has fallen over two-thirds, from 9,700 in 1948 to only 3,100 in 1973. But today's plants are much larger, handling an average volume of almost 3½ times more milk.

There's been a rapid decline in the number of plants producing every dairy product except Italian cheese, while output per plant has gone up sharply. The major reason for this trend is the economy of size in dairy processing. Large plants, when properly managed, can operate at a lower cost per unit than smaller plants. And technological developments have increased the capital requirements and consequently the optimum volume per plant.

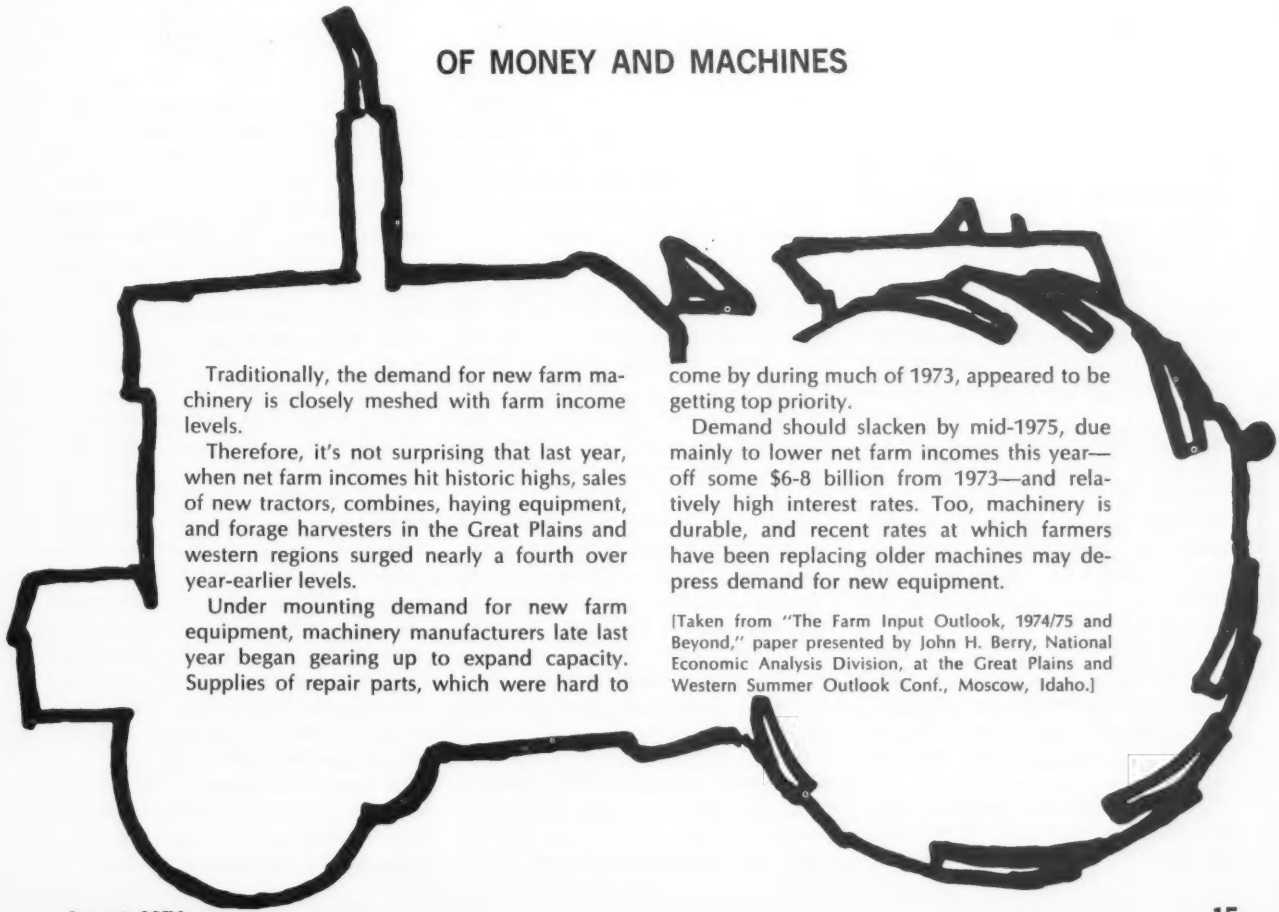
Changing demand for the different dairy products has probably affected trends in plant numbers. The drop in plant numbers has been greater for butter than for other dairy products, reflecting lower butter consumption and production. On the other hand, rising cheese consumption provides incentive for the changeover to bigger, more efficient operations. And the sharp growth in Italian cheese sales, helped by brisk pizza sales, has been partly responsible for the expansion in the number of plants making Italian cheese.

The number of plants in the largest producing group for each dairy product has increased since 1957. These large plants produce a significant share of total U.S. output. For example, in 1972, only 7 percent of the butter plants produced 8 million pounds or more of butter each, but they accounted for over half of total output. It would have taken only 137 butter plants of that size to produce total U.S. output in 1972, rather than the 475 in operation.

Similarly, 11 American cheese plants, or 2 percent of the total, each made more than 20 million pounds of cheese in 1972. However, they accounted for over one-fifth of total U.S. output. If all plants had been this large, the 1972 total output could have been produced by 82 plants, instead of by the 613 actually in operation.

[Based on article by James J. Miller and Robert R. Miller, Commodity Economics Division, "Changes in Number and Size of Dairy Plants," in *Dairy Situation*, DS-351, July 1974.]

OF MONEY AND MACHINES



Traditionally, the demand for new farm machinery is closely meshed with farm income levels.

Therefore, it's not surprising that last year, when net farm incomes hit historic highs, sales of new tractors, combines, haying equipment, and forage harvesters in the Great Plains and western regions surged nearly a fourth over year-earlier levels.

Under mounting demand for new farm equipment, machinery manufacturers late last year began gearing up to expand capacity. Supplies of repair parts, which were hard to come by during much of 1973, appeared to be getting top priority.

Demand should slacken by mid-1975, due mainly to lower net farm incomes this year—off some $6-8 billion from 1973—and relatively high interest rates. Too, machinery is durable, and recent rates at which farmers have been replacing older machines may depress demand for new equipment.

[Taken from "The Farm Input Outlook, 1974/75 and Beyond," paper presented by John H. Berry, National Economic Analysis Division, at the Great Plains and Western Summer Outlook Conf., Moscow, Idaho.]

THE WATERSHED'S COURSE..A SWELL OF USES

Launched 2 decades ago, the Soil Conservation Service's Small Watershed Program has since been expanded to include a sizable list of nonagricultural projects.

A community may decide to develop a watershed project for flood prevention. . .for irrigation or drainage. . .for storing water for industrial use. . .for recreational purposes. . .or for a combination of these.

All of these purposes come under the Small Watershed Program of USDA's Soil Conservation Service.

Originated in 1954 to provide means for flood protection to farmland in upstream areas, this program has been expanded through the years to include not only a greater share of Federal funding, but to include such nonagricultural projects as reservoirs for municipal and industrial water supplies, for recreational use, and for fish and wildlife.

In a study of the program from its inception through 1972, ERS found:

Flood prevention has generally been by far the biggest item in structural costs, and the program itself. This was especially true for the early years of the program through the mid-sixties.

Costs for other purposes have trended up in recent years, and for 1969–1972 accounted for about 25 percent of total structural costs. Up until 1969, drainage costs ranked second behind flood prevention, but for 1969–72, recreational purposes accounted for more than 40 percent of the money spent for purposes other than flood prevention.

West stands apart. The West showed the sharpest variation from the national pattern in project purposes. It varied most in the fact that it's the only area with a significant amount of irrigation and in the fact that structure costs there have run considerably above other regions since the early sixties.

Project approvals trended up steadily during the program's first 5 years, but have fluctuated since. Approvals reached a high of 103 in 1969 but have since been down sharply. This is attributable to both a concerted effort to complete authorized, unfinished projects and to the impact of the National Environmental Policy Act of 1969. The act required many completed but unauthorized plans to be reexamined for environmental impact and in some cases, required redesigning of structures to minimize adverse environmental effects.

It is expected that once these two tasks are accomplished, new approvals will once again approach the levels of the mid-sixties.

Chief beneficiary. Through the years, agricultural benefits from the watershed projects have run far ahead of nonagricultural benefits. Nonagricultural and regional benefits accounted for only a token in the overall program up until 1969–72. They've since been more significant, but agricultural benefits still comprised more than one-half of total benefits for the 1969–72 period.

Fish and wildlife were added as a program purpose by amendment in 1958. However, there has been little increase in local response to authori-

zation for Federal cost sharing for this purpose.

Exceptions. On a regional basis, the Northeast and Ohio regions in 1969–72 were the only areas to have greater nonagricultural benefits from the program than agricultural benefits. Most of this was for recreation.

During this same time period, flood prevention accounted for about two-thirds of total agricultural benefits.

Nationally, nonagricultural benefits for flood prevention and land enhancement have never been significant. Instead, the program has been justified mainly by agricultural benefits during its life with a considerable boost in recent years from nonagricultural water development—principally for recreation and municipal and industrial water projects.

Average recreation investment has been lowest in the area around the central and southern Rocky Mountains and highest along the Atlantic and Pacific coastal regions.

How it is. Among the study's conclusions—

√ That, not unexpectedly, a generally direct correlation exists between the amount of Federal financial assistance and the degree of program participation. For instance, flood prevention—the dominant use under the program—is the only one in which Federal funds are authorized for total construction cost. Drainage and irrigation, too, have expanded considerably following amendments for Federal cost sharing. Recreation has expanded even more rapidly under Federal cost sharing arrangements.

√ That expansion of municipal and industrial water storage with only token Federal financial assistance indicates increasing interest by communities in multi-purpose reservoir construction to provide increased water supply at modest cost.

√ That fish and wildlife development's low response to the availability of Federal financial assistance may be related to the fact that opportunities for fishing and hunting are already provided under both reservoirs for recreation and under some reservoirs built for such purposes as flood detention.

[Based on *Evolution of the Small Watershed Program*, AER–262, by Dallas M. Lea and C. Dudley Mattson, Natural Resource Economics Division.]

When the Fare Is Fowl, Information Is Sketchy

Stewing hens, ducks, and geese aren't among the poultry family's more prominent members. . .which may explain why information about their production and marketing isn't widely available.

Early 1973 marked the first time that retail price data were gathered on each of the three products. Farm and retail prices, including price spreads and some details on production, were brought together in a recent issue of ERS's *Poultry and Egg Situation*.

Stewing hens are mature birds culled from the Nation's egg laying flock. Last year, there were some 520 million pounds (ready-to-cook weight) of mature chicken slaughtered under Federal inspection. Meat from these birds usually ends up in chicken soup, pot pies, and TV dinners, though some goes to retail stores for sale as stewing hens.

The price of stewing hens (ready-to-cook basis) on Southeast farms averaged about 29½ cents per pound last year. The wholesale price averaged over 46 cents per pound, the retail price, almost 66 cents.

The price spread from farmer to consumer came to just over 36 cents per pound, while the farmer's share of the consumer's dollar spent on stewing chicken averaged 45 percent.

Production of duck, like other poultry, is highly specialized. Top producer is New York's Long Island. The last agricultural census in 1969 found some 556 farms in New York State with nearly 550,000 ducks on hand. Farmers in Indiana, Wisconsin, California, and Missouri also reported State inventories totaling more than 100,000.

Last year, about 11 million ducks weighing 69 million pounds were slaughtered under Federal inspection. Ready-to-cook duck usually weighs about 4–5 pounds and is packaged individually and frozen.

In 1973, the farm value of duck on a ready-to-cook basis averaged 52.1 cents per pound. The retail value ran about 92 cents, and the farmer's share of the consumer's duck-buying dollar averaged nearly 57 percent.

Geese, like ducks, are packaged individually and frozen. Retail sales tend to peak around the holiday season. According to the latest agricultural census, South Dakota is the Nation's leading producer. That State claimed two-thirds of the 4.3 million pounds (liveweight) slaughtered in 1973.

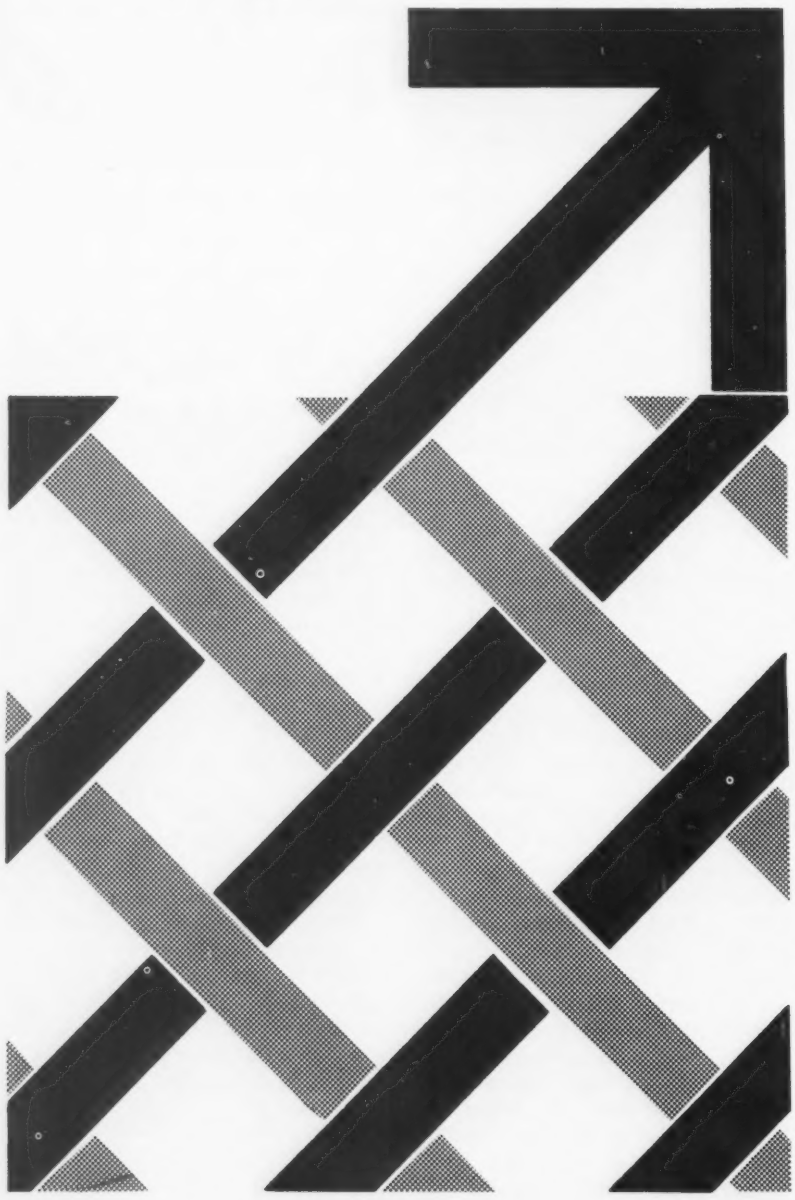
Washington and Iowa also figure prominently in the production and sale of geese. Only six States reported geese slaughtered under Federal inspection last year.

An average goose weighed about 10 pounds last year. Farm prices for geese averaged 73.5 cents, ready-to-cook. Wholesale prices ran about 96 cents, and retail prices, $1.07. Farmers got about 69 percent of every consumer dollar spent on geese.

[Based on "Production, Prices, and Price Spreads for Fowl, Ducks, and Geese," by Kenneth E. Blase, Commodity Economics Division, in the *Poultry and Egg Situation*, PES–282, June 1974.]

weaving the future fiber picture

In the last 20 years, chemically derived fibers have captured cotton's lead in many textile uses. Here's a look at the past fiber boom and a glimpse at the future.



What do nattily-attired men and women have in common with rugs and draperies, tires, sporting goods, and a host of other items? Namely, their increasing use of non-cellulosic fibers such as polyester, nylon, and acrylic.

And if present trends continue, barring severe fuel shortages, the inroads already made into fiber markets by the non-cellulosics will be deepened by 1985.

According to an ERS study of textile demand in the U.S., per capita domestic consumption of all fibers is projected to be 82–90 pounds raw fiber equivalent in the next decade—up from 50 pounds in 1970.

Of this, about 60–63 pounds are estimated for non-cellulosic fiber use—a whopping rise from the 20-pound average for 1968–70.

Cotton would pull a distant second place with 14–18 pounds per person, decreasing somewhat from the 21 pounds used in 1968–70; cellulosic fibers, such as rayon-acetate, are expected to remain near the current level of 7–8 pounds. And wool consumption, which has been steadily declining since the late 1940's, is estimated at 1 pound per person.

Fuelish fibers. However, economists note that their projections for individual fibers as well as for total fiber consumption depend largely on the availability of fuel and petrochemicals.

If fuel is scarce, non-cellulosic use would undoubtedly suffer—and cotton would benefit—since much less energy is required to produce a pound of cotton than a pound of non-cellulosic fiber.

Until the late 1960's, cotton was the principal fiber processed by U.S. textile mills. In 1967, however, cotton's share of the total fiber market fell below 50 percent and by the early 1970's had dropped to nearly a

third, compared with almost three-fourths of the market in the late 1940's.

Increased textile imports and accelerating shifts to manmade fibers were primarily responsible for cotton's slipping mill demand. In the postwar period, manmade fibers' share of the domestic market jumped sharply—from about one-fifth in the late 1940's to more than one-half by the late 1960's.

Non-cellulosic boom. The most dramatic penetration of the fiber market has been made by non-cellulosic fibers, which are synthesized exclusively from chemicals. While the cellulosics, which are produced from the fibrous cellulose substance found in plants, have generally maintained a 15 to 20-percent share of the market, non-cellulosics have soared from less than 1 percent in 1947 to well over 40 percent by 1970.

Developments in fiber blending technology in the early 1960's—particularly polyester-cotton blends—added impetus to the non-cellulosic boom, and use of these fibers more than tripled in that decade. Annual increases in non-cellulosic consumption have averaged at least 15 percent in the last 20 years.

Ironically, the popularity of blends has also helped cotton in some respects. As demand for blends increases, this boosts the market for cotton used in them.

However, in markets which were once cotton's exclusive domain, such as bed sheets, the introduction of blends has displaced cotton to some extent.

Shifting mill demand. Many fabric mills switched over to manmade fibers or to non-cellulose/cotton blends in the late 1960's as the price of non-cellulosics became more competitive with cotton.

A major factor behind the shift was the sporadic fluctuation of cotton quality, supplies, and prices according to insect and weather conditions. In contrast, manmade fiber manufacturers could offer steady supplies at reasonably stable prices.

Once a mill makes such a changeover, it is a costly and time-consuming procedure to reconvert machinery for cotton processing. Consequently, cotton producers have encountered some difficulty in attempting to recover lost markets.

However, no single manmade fiber has duplicated all of cotton's desirable characteristics, such as comfort, durability, and absorbancy, and economists feel these factors could assume increasing importance in maintaining consumer demand for cotton products in the future.

Anticipation of long-run petrochemical shortages could also prompt mills to switch back to cotton fabric production.

Major fiber markets. Currently, the home furnishings and apparel markets are the largest users of all types of fibers, accounting for more than two-thirds of the total demand for textile products.

Other major markets include consumer goods such as luggage, shoes, and medical supplies, and industrial uses, such as cables, conveyor belts, and tire cord.

In most end uses, the non-cellulosics now dominate, and in some cases economists have found that these fibers were responsible for all recent growth in particular markets.

Women's clothing, carpeting, tires, and reinforced plastics are primary examples of market outlets where increases in non-cellulosic usage have been phenomenal.

Since the early 1950's, when these fibers accounted for only small shares of the total fiber used in these outlets, the non-cellulosics have captured up to 50 or 60 percent of the market.

Steady cotton users. However, for many items, cotton is still king. Despite rising competition from manmade fibers and blends, this versatile fabric continues to reign over bed sheets, towels, sewing thread, utility clothing, transportation upholstery, and men's underwear. It also makes up over half the total fiber used in the men's apparel market.

If the cotton fiber industry could develop a satisfactory permanent press finish or could achieve greater price stability and favorable price differentials in the long-run, economists believe cotton's overall competitive position would improve.

Stepped-up promotional efforts could also encourage cotton use.

[Based on manuscript by George E. Dudley, National Economic Analysis Division, entitled Demand for Textile Fibers in the United States: Estimation of Price Elasticities in Major End-Use Markets.]

Cotton Complements

Drastic shortages and mountainous surpluses so dominate world agricultural news that it's something of a surprise when production and consumption come into close balance.

Yet that's how the world cotton picture shaped up during 1973/74. Output last season remained near the previous year's 59.4 million bales. Meantime, use of cotton increased 2 million bales to about 59 million.

The developing countries and Communist countries accounted for most of the increase. On the production side, reduced output in Mexico, Turkey, India, and Pakistan offset gains in the Soviet Union, People's Republic of China, and Central America.

Mounting world demand for cotton and production problems in some countries shored up trade levels again last season. Exports fell just shy of 1972/73's record 20.6 million bales. And with demand for raw cotton running high, U.S. exports accounted for about 30 percent of the world total—versus 26 percent a year earlier.

The supply/demand balance tends to break down among the foreign non-Communist countries, where cotton consumption commands a widening lead. Last year the gap tripled to more than 3 million bales.

For 1974/75, production may pick up slightly, as foreign non-Communist growers respond to attractive prices. Yields, however, will probably not match last year's better-than-average 259 pounds.

[Based on material by Russell G. Barlowe, Commodity Economics Division, in the *Cotton Situation*, CS–266, May 1974.]

The Japanese call it King of Beef. Americans who've been lucky enough to taste it call it a superb culinary experience.

And at these prices it should be! With a grocery tab ranging from $12 to $17 Yankee dollars a pound, Japan's Ise Matsuzaka beef is the most expensive prime beef in the world.

What is it that makes Ise Matsuzaka beef so outstanding?

For one thing, Japanese cattlemen are careful to select only virgin females from the breeding districts. They believe a drop in beef tenderness is definitely discernible when bulls are allowed in the pen.

Calves are purchased from breeders when they are 8 months old. During the early growing period on the cattle farms, several head of cattle are penned together and are given room to roam on pasture land. Later, the cattle are placed in closer confinement.

Moderate exercise is provided by their owners, who take the cattle on a daily walk. With their small herds the Japanese place great stock in a warm rapport between man and beast, and they meticulously tend to their animals' needs.

During the later fattening period, the cows are individually penned in box stalls with feed available in one tub and water in another. At this stage in their development the cattle are given no exercise.

Finally, in the last phases of growth, the cattle are fed a specially formulated blend of soybean meal, corn, wheat bran, rolled barley, and Italian rye grass.

When the animals weight in at 500 kilograms—about 1,100 pounds—they are given a dietary treat—one bottle of beer a day. The beer provides added nutritive value as well as aiding digestion. The cows seem to love it.

In 1973 a fattened 3-year-old animal sold for more than $2,600 and prices are still rising. That sounds like a lot, but Japanese demand for beef has soared, and production costs for Ise Matsuzaka beef are high.

Between 1972 and 1973, for example, the cost of an 8-month-old calf rose nearly $400 to range from $950 to over $1,100.

Other production costs include roughly 7 pounds of feed per pound of body weight. Although the Japanese do produce some feed domestically, much of it must be imported, and transportation charges make grain costs relatively high in Japan. Beer also contributes to costs in the animals' third year of growth.

To reduce production costs, Japanese cattlemen are tending to shorten the fattening period and to auction their cattle about 4 months earlier than in the past.

But even so, raw slices of Matsuzaka beef are tender enough to cut with chopsticks. Which in anybody's book makes it well deserving of its royal title.

[Based on special material by Roger P. Lewis, Foreign Demand and Competition Division.]

Down on the Farm: Population Drop Ebbs, But Only for Whites

For the first time since the mid-1940's, 3 years have passed without a significant decrease in the number of farm residents.

The latest cooperative survey taken by the Census Bureau and ERS shows an average of 9,472,000 persons living on farms in the 12-month period centered on April 1973—a drop of 240,000 or 2.5 percent from 1970.

This relative stability apparently occurred only among whites, however, as blacks and other minority groups have continued to leave the farm in substantial numbers.

Although the overall decrease was minor, it further reduced the farm share of the total U.S. population. The proportion of the national population living on farms has fallen from 30.1 percent in 1920 to 4.5 percent in 1973.

At the same time, other trends toward an older, predominantly male farm population with declining minority representation have also been maintained. But just as the leveling off in the farm population decrease is more apparent among whites, so is the tendency toward an older age structure.

Young children make up a larger percentage of minority farm dwellers than of white residents due to the higher birth rates of minority farm people. In general, though, the proportion of young children on the farm is decreasing, reflecting the drop in the national birth rate of recent years. Meanwhile the percentage of farm residents 65 or older has increased in the last decade.

The dwindling size and changing age structure of the farm population have not affected one of its most distinctive characteristics—the preponderance of men. In 1973, there were 108 men for every 100 women living on farms. In contrast, women outnumbered men by 100 to 92 in the nonfarm population.

The survey found 60 percent of the farm residents 14 years old and over in the labor force in 1973. Although this percentage has remained fairly constant in recent years, the proportion of farm people working in nonagricultural industries has continued to rise.

Farm residents who work off the farm accounted for nearly half of all employed farm residents in 1973, up from only a third in 1960. Southern farm dwellers are particularly likely to have a nonfarm job as their principal employment, largely because small, low income farms are most prevalent in this region.

To some extent the downward trend in the number of farm residents employed in agriculture has been offset by the number of nonfarm residents who have taken up agricultural work. From 1960 to 1973, the proportion of farm workers commuting to the farm has risen from 25 percent to 40 percent of the total agricultural employment.

The current farm population survey reports that unemployment among farm residents is typically much lower than among nonfarm people—1.9 percent compared with 5.3 percent. This difference at least partially reflects the high incidence of multiple job holding among those employed in agriculture.

Self-employment, principally as farm operators, is the primary working arrangement for farm people engaged in agriculture, although most blacks and other minorities are wage and salary workers. The rapid decline in the number of farms operated by minorities is responsible.

If employed, farm women are more likely to work off the farm in nonagricultural industries. Those who remain in agriculture are most often unpaid family workers.

[Based on article by Vera J. Banks, Economic Development Division, entitled "Farm Population of the United States: 1973," in *Current Population Reports: Farm Population*, Census–ERS Series, P–27, No. 45.]

Recent Publications

Single copies of the publications listed here are available free from The Farm Index, Economic Research Service, Rm. 1664–So., U.S. Department of Agriculture, Washington, D.C. 20250. However, publications indicated by (*) may be obtained only by writing to the experiment station or university. For addresses, see July and December issues of The Farm Index.

The Agricultural Situation in Africa and West Asia—Review of 1973 and Outlook for 1974. Foreign Demand and Competition Division. ERS-For. 363.

This report reviews a largely dismal agricultural year for African and West Asian countries—a year marked by poor crops and the lowest levels of food production in recent times. On a per capita basis, food production fell 6 percent in Africa as dry weather and drought conditions continued to hold sway, and 10 percent in West Asia. Also included is the outlook for current production and trade of selected commodities, and a country-by-country summary of trade with the U.S.

Livestock and Meat Statistics. Supplement for 1973. Economic Research Service, Statistical Reporting Service, and Agricultural Marketing Service. Stat. Bull. No. 522.

This bulletin provides comprehensive recent data on livestock production, sales, and slaughter; livestock market prices; wholesale and retail meat prices; farm-to-retail price spreads; and the storage, processing, and foreign trade in meat and other livestock products. The report generally covers 1970 through 1973.

Supply Control Savings for Hog Slaughtering-Processing Plants. J. B. Holtman and H. F. Barreto, Michigan State University, and J. D. Sullivan, National Economic Analysis Division. AER–258.

Using a random-process simulation model, researchers found that slaughter plants could realize cost savings of more than 10 percent if complete hog market supply control could be obtained. Savings averaged $1.33 per hog for the five plant sizes studied. Although a high daily variation in hog supplies was considered, seasonal variations were the major determinant of costs attributed to varying supplies.

Basic Agricultural Resources of Kenya. Cary B. Singleton, Jr., Foreign Demand and Competition Division. ERS-For. 346.

Expansion of cash crops for export has been an important component of Kenya's overall economic growth in recent years, and this report looks into that country's agricultural resources, policies and goals, research, and farm practices and technology. Economic development plans for the immediate future are focused on the agricultural and agribusiness sectors, and these are also discussed.

The Value Added Tax: Background and Implications for Agriculture. J. B. Penn and G. D. Irwin, North Carolina State University, in cooperation with ERS. EIR–37.*

A value added tax for the U.S. has been undergoing widening discussion, either as a replacement for existing taxes or as a new revenue source. This report explores the potential effects of this form of taxation on the agricultural sector. Included in the study is information on the history, concept, various forms, and advantages and disadvantages of value added taxes.

Livestock-Feed Relationships: National and State. George C. Allen, Earl F. Hodges, and Margaret Devers, National Economic Analysis Division. Stat. Bull. No. 530.

This compilation of statistical indices relates livestock numbers and production to feed consumption from 1952 through 1971. Livestock-feed ratios are reported on a national and State basis by the kinds of livestock and poultry on farms and their corresponding livestock products. Also included are estimates of excesses and deficiencies of feed grains produced and consumed by each State, and the factors used to generate the State index numbers.

Economic Impact of Controlling Surface Water Runoff from Point Sources in U.S. Hog Production. Roy N. Van Arsdall and Richard B. Smith, Commodity Economics Division, and Thomas A. Stucker, University of Illinois. AER–263.

Of the estimated 112,000 hog farms with uncontrolled runoff problems, researchers found that 86,000 use open-lot production systems. Although EPA effluent guidelines had not been finalized when the study was made, clean-up programs for open-lot systems in the 15 major hog-producing States were projected to cost from $254 to $290 million. The economic burden would fall heaviest on small producers selling less than 100 hogs annually.

Evolution of the Small Watershed Program. Dallas M. Lea and C. Dudley Mattson, Natural Resource Economics Division. AER–262.

Although flood protection, drainage, and irrigation for farmland remain the most important features of the Small Watershed Program, nonagricultural projects have grown rapidly in recent years, according to this study. Topping the list is recreational development, particularly in the Atlantic and Pacific coastal regions. Municipal and industrial water supply and fish and wildlife resource projects are also significant users of program funds.

Economic Impact of Discontinuing Aldrin Use in Corn Production. Herman W. Delvo, National Economic Analysis Division. ERS–557.

According to this study, canceling farm use of aldrin for corn production would increase farmers' costs for alternative insect control and reduce yields where other insecticides were less effective than aldrin. Also, farmers would have higher variable production costs if more land were cultivated to maintain stable corn output and prices. If acreage weren't expanded, consumers would foot a higher bill for corn products.

Getting It Together

Over 12 million people help prepare your evening meal. If you wonder who they are, ERS has the answers in a new slide set entitled *The 150 Billion Dollar Food Assembly Line.*

Food is America's biggest business. The average American eats 1,500 pounds of food every year. To produce and market this food, an assembly line is needed—a line that runs back from retailers through wholesalers, shippers, processors, and farmers.

The 150 Billion Dollar Food Assembly Line introduces you to the people who man the line. The informative and visually entertaining presentation is available both as a slide set of 58 color slides and a filmstrip of 58 frames with audio cassette soundtrack.

Copies of the slide set can be purchased for $17.00 from Photography Division, Office of Communication, U.S. Department of Agriculture, Washington, D.C. 20250. Order the filmstrip for $9.50 from Photo Lab, Inc., 3825 Georgia Avenue, N.W., Washington, D.C. 20001. The price includes the soundtrack cassette and two copies of the illustrated narrative guide.

Other slide sets in the ERS food series are: *What's Happening to Food Prices,* 153 frames, slide set $35, filmstrip $15; *Revelations of a Register Tape,* 71 frames, slide set $18.50, filmstrip $10.50; and *The Peaceful Revolutionists,* 195 frames, slide set $50, filmstrip $20.

Farm Characteristics, Production, and Land Resources, by Production Areas of the North Central Region. J. A. Sharples and N. R. Martin, Jr., Commodity Economics Division, and D. L. Williams, National Economic Analysis Division. Stat. Bull. No. 532.

This publication provides comprehensive data on the agricultural resource base in the North Central region in tabular form. Included are 1969 Agricultural Census figures on farm and operator characteristics and livestock and crop production, 1972 data on bases and allotments from the Agricultural Stabilization and Conservation Service, and 1967 land resource information from the Conservation Needs Inventory.

The Hired Farm Working Force of 1973: A Statistical Report. Robert C. McElroy, Economic Development Division. AER–265.

About 2.7 million persons age 14 and over made up the hired farm work force last year. The group's profile reveals most were young white males who lived in nonfarm areas. About half—primarily students and housewives—were not in the labor force most of the year and only 27 percent were engaged chiefly in farm work. The number of migratory workers has been rising since 1971, but the nonmigratory group showed a 6-percent decline from 1972.

Economics of Large Wheat Farms in the Great Plains. Ronald D. Krenz and Walter G. Heid, Jr., Commodity Economics Division, and Harry Sitler, Colorado State University. AER–264.

Aimed at determining whether large wheat farms are more or less profitable than average-size farms, this study found that the economies achieved by large farms in buying and selling and in lower machinery investments are partially offset by higher costs for labor and other hired services. Rates of return to equity before income taxes increase with farm size, but rates of return after taxes are very similar regardless of size. Continued growth in the number of large farms is expected.

Economic Trends

Item	Unit or Base Period	1967	1973 Year	1973 May	1974 Mar.	1974 Apr.	1974 May
Prices:							
Prices received by farmers	1967=100	—	172	163	194	183	175
Crops	1967=100	—	164	154	216	205	201
Livestock and products	1967=100	—	179	170	179	169	158
Prices paid, interest, taxes and wage rates	1967=100	—	145	143	161	164	165
Family living items	1967=100	—	138	136	155	157	159
Production items	1967=100	—	146	143	162	167	166
Ratio [1]	1967=100	—	119	114	120	112	106
Wholesale prices, all commodities	1967=100	—	134.7	133.2	151.4	152.7	155.0
Industrial commodities	1967=100	—	125.9	125.3	142.4	146.6	150.5
Farm products	1967=100	—	176.3	170.4	197.0	186.2	180.8
Processed foods and feeds	1967=100	—	148.1	145.0	163.0	159.1	158.9
Consumer price index, all items	1967=100	—	133.1	131.5	143.1	144.0	145.6
Food	1967=100	—	141.4	137.9	159.1	158.6	159.7
Farm Food Market Basket: [2]							
Retail cost	1967=100	—	142.3	138.2	161.7	159.9	160.4
Farm value	1967=100	—	167.0	158.1	181.8	172.9	164.2
Farm-retail spread	1967=100	—	126.6	125.6	149.0	151.7	158.0
Farmers' share of retail cost	Percent	—	46	44	44	42	40
Farm Income: [3]							
Volume of farm marketings	1967=100	—	116	89	89	83	89
Cash receipts from farm marketings	Million dollars	42,693	8,590	5,718	6,180	5,536	5,600
Crops	Million dollars	18,434	42,346	1,766	2,346	1,800	1,800
Livestock and products	Million dollars	24,259	46,244	3,952	3,834	3,736	3,800
Realized gross income [4]	Billion dollars	49.9	97.0	—	105.0	—	—
Farm production expenses [4]	Billion dollars	38.3	64.7	—	72.1	—	—
Realized net income [4]	Billion dollars	11.6	32.2	—	32.9	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	—	9,404	1,365	2,106	2,014	1,795
Agricultural imports	Million dollars	—	6,459	786	984	878	890
Land Values:							
Average value per acre	Dollars	[6]168	[7]247	—	—	—	[8]310
Total value of farm real estate	Billion dollars	[6]181.9	[7]259.5	—	—	—	[8]324.0
Gross National Product: [4]	Billion dollars	793.9	1,294.9	—	1,358.8	—	—
Consumption	Billion dollars	492.1	805.2	—	840.6	—	—
Investment	Billion dollars	116.6	209.4	—	210.5	—	—
Government expenditures	Billion dollars	180.1	276.4	—	296.3	—	—
Net exports	Billion dollars	5.2	3.9	—	11.3	—	—
Income and Spending: [5]							
Personal income, annual rate	Billion dollars	629.3	1,055.0	1,038.9	1,117.1	1,125.2	1,134.4
Total retail sales, monthly rate	Million dollars	26,151	41,943	41,723	43,872	44,283	44,894
Retail sales of food group, monthly rate	Million dollars	5,759	8,811	8,665	9,594	9,689	9,795
Employment and Wages: [9]							
Total civilian employment	Millions	74.4	[9]84.4	[9]84.0	[9]85.9	[9]85.8	[9]86.0
Agricultural	Millions	3.8	[9]3.5	[9]3.3	[9]3.7	[9]3.5	[9]3.5
Rate of unemployment	Percent	3.8	4.9	4.3	5.1	5.0	5.2
Workweek in manufacturing	Hours	40.6	40.7	40.7	40.4	39.3	40.3
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	4.07	4.02	4.24	4.25	4.33
Industrial Production: [5]	1967 = 100	—	126	125	125	125	126
Manufacturers' Shipments and Inventories: [5]							
Total shipments, monthly rate	Million dollars	46,449	71,398	70,376	78,197	79,050	81,319
Total inventories, book value end of month	Million dollars	84,655	120,870	111,625	126,500	128,438	130,936
Total new orders, monthly rate	Million dollars	46,763	73,812	73,600	79,547	82,059	85,264

[1] Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. [2] Average annual quantities of farm food products purchased by urban wage earner and clerical worker households (including those of single workers living alone) in 1959–61—estimated monthly. [3] Annual and quarterly data are on 50-State basis. [4] Annual rates seasonally adjusted first quarter. [5] Seasonally adjusted. [6] As of March 1, 1967. [7] As of March 1, 1973. [8] As of March 1, 1974. [9] Beginning January 1972 data not strictly comparable with prior data because of adjustment to 1970 Census data.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Monthly Retail Trade Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

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